

UTAH DIVISION OF AIR QUALITY
MODIFIED SOURCE PLAN REVIEW

S. Gale Chapman, President
Intermountain Power Service Corporation
850 West Brush Wellman Road
Delta, Utah 84624
RE:

Project Code: N0327-008

REVIEW ENGINEER:

DATE:

NOTICE OF INTENT SUBMITTED:

PLANT CONTACT:

PHONE NUMBERS:

FAX NUMBER:

SOURCE LOCATION:

UTM COORDINATES:

Intermountain Generating Station DAQE-523-01 Amendment to Add
Inadvertently Missed Data

Millard County, Utah CDS-A, ATT, Title V, Title IV, NSPS

Milka M. Radulovic

August 9, 2001

August 3, 2001

Rand Crafts

(435) 864-6494

(435) 864-0994

850 West Brush Wellman Road Delta, Millard County, Utah

4,374.4 km Northing, 364.2 km Easting, Zone 12
datum NAD27

APPROVALS:

Peer Engineer _____

Nando Meli

DAQ requests that a company/corporation official read the attached draft/proposed Plan Review with Recommended Approval Order Conditions. If this person does not understand or does not agree with the conditions, the PLAN REVIEW ENGINEER should be contacted within five days after receipt of the Plan Review. Special attention needs to be addressed to the Recommended AO Conditions because they will be recommended for the final AO. If this person understands and the company/corporation agrees with the Plan Review or Recommended AO Conditions, this person should sign below and return (can use FAX # 801-536-4099) within 10 days after receipt of the conditions. If the Plan Review Engineer is not contacted within 10 days, the Plan Review Engineer shall assume that the Company/Corporation official agrees with this Plan Review and will process the Plan Review towards final approval. No public comment period will be required before the Approval Order can be issued.

Thank You

Applicant Contact _____

(Signature & Date)

9-5-01

OPTIONAL: In order for this Source Plan Review and associated Approval Order conditions to be administratively included in your Operating Permit (Application), the Responsible Official as defined in R307-415-3, must sign the statement below and the signature above is not necessary. **THIS IS STRICTLY OPTIONAL!** If you do not desire this Plan Review to be administratively included in your Operating Permit (Application), only the Applicant Contact signature above is required. Failure to have the Responsible Official sign below will not delay the Approval Order, but will require a separate update to your Operating Permit Application or a request for modification of your Operating Permit, signed by the Responsible Official, in accordance with R307-415-5a through 5e or R307-415-7a through 7i.

"Based on reasonable inquiry, I certify that the information provided for this Approval Order has been true, accurate and complete and request that this Approval Order be administratively amended to the Operating Permit (Application)."

Responsible Official _____

(Signature & Date)

9-5-01

Engineering Review: Amendment to DAQE-523-01 to Add Missed Data

September 5, 2001

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N:\MRADULOV\WP\REVIEW\SECRETARY\IPP-523\AMENDMENT.WPD

TYPE OF IMPACT AREA

Attainment Area Yes

NSPS Yes
40 CFR Part 60, Subpart Da (Fossil-Fuel-Fired Steam Generators for Which Construction is
Commenced After September 18, 1978), and Subpart Y (Coal Preparation Plants)

NESHAP No
MACT No

Hazardous Air Pollutants (HAPs) Yes
Hazardous Air Pollutants Major Source Yes
(No HAPs involved in modification)

New Major Source No
Major Modification No
PSD Permit Yes
PSD Increment (modeling) No

Operating Permit Program
Minor No
Major Yes

Send to EPA Yes
Comment period None required

Abstract

Intermountain Power Service Corporation (IPSC) operates the Intermountain Generating Station (IGS) coal fired steam-electric plant, consisting of two 875 MW units, that is located near Delta in Millard County. IPSC is requesting an amendment to their current Approval Order (AO) DAQE-523-01 to correct the consolidated AO. The amendments were approved in previous AOs and were inadvertently missed during the AO consolidation process. IGS was approved to spray their coal with self-generated used oil for energy recovery and this condition was not included in the consolidated AO. Additionally the following was not included in the AO:

- A "30-day rolling average" for the NO_x and SO₂ testing limits was added;*
- The consumption limit language for the auxiliary boiler was changed to require records for "when the auxiliary boiler is in operation" instead of "when the plant is in operation";*
- Dust control condition language was changed to reflect that IPSC has already submitted a dust control plan, and*
- The language was added that allows bituminous and subbituminous coals as a fuel in the 8,500 x 10⁶ Btu/hr boilers along with diesel fuel or natural gas as fuels during start-ups, shutdowns, upsets and flame stabilization.*

Millard County is an attainment area of the National Ambient Air Quality Standards for all pollutants. New Source Performance Standards, Subparts Da and Y apply to this source. Boiler 1 & 2 are also Group 1, Phase II units under the Acid Rain Program. IPSC is a major source of NO_x, SO₂, CO, and PM₁₀. Title V of the 1990 Clean Air Act applies to this source. The Title V permit will be administratively amended after this AO has been issued.

Newspaper Notice

These amendments were previously approved in previous AOs. Therefore, there will be **no public** comment period for these amendments and a newspaper notice will not be required.

I. DESCRIPTION OF PROPOSAL

Intermountain Power Service Corporation (IPSC) operates the Intermountain Generating Station (IGS) coal fired steam-electric plant, consisting of two 875 MW units, that is located near Delta in Millard County. IPSC is requesting an amendment to their current approval order (AO) DAQE-523-01 to correct inadvertently missed data in the process of AO consolidation:

1. Add missing language that coal may be sprayed with "self-generated used oil for energy recovery" for combustion (data from AO BAQE-672-89, Condition #4)
2. Add missing language in the Condition # 9 "30-day rolling average" for the NO_x and SO₂ testing limits (from the NSPS, Subpart Da)
3. Replace language in the Condition 11 from "for all periods when plant is in operation" with "for all periods when auxiliary boiler is in operation".
4. Correct the language in the Condition #14 to reflect the fact that the IPSC has submitted dust control plan.

5. Add the missing language to show that bituminous and subbituminous coals are allowed as a fuel in the $8,500 \times 10^6$ Btu/hr boilers along with diesel fuel or natural gas fuels which are allowed during the start-ups, shutdowns, upsets and flame stabilization conditions (data from DAQE-028-97, BAQE-672-89, DAQE-009-97).

II. EMISSION SUMMARY

The emissions from the entire plant will be as follows:

<u>Pollutant</u>	<u>Current Emissions</u> <u>tons/year</u>	<u>Emission Increases</u> <u>tons/year</u>	<u>Total Emissions</u> <u>tons/year</u>
PM ₁₀	248.88	0.00	248.88
SO ₂	3,698.32	0.00	3,698.32
NO _x	24,178.63	0.00	24,178.63
CO	1,312.44	0.00	1,312.44
VOC	14.29	0.00	14.29
HAPs	82.67	0.00	82.67

III. BEST AVAILABLE CONTROL TECHNOLOGY (BACT) ANALYSIS

BACT applies to each emission point. BACT analysis performed in the previous engineering reviews apply to the equipment in this AO.

IV. APPLICABILITY OF FEDERAL REGULATIONS AND UTAH ADMINISTRATIVE CODES (UAC)

The Notice of Intent submitted is for an existing source. It is not a new major source or a major modification. At the time of this review the Utah Administrative Code Rules 307 (UAC R307) and federal regulations have been examined to determine their applicability to this Notice of Intent.

Since this project is defined as an amendment the applicability of federal regulations and Utah administrative codes review were not required.

V. RECOMMENDED APPROVAL ORDER CONDITIONS

General Conditions:

1. This Approval Order (AO) applies to the following company:

Intermountain Power Service Corporation
850 West Brush Wellman Road
Delta, Utah 84624
Phone Number: (435) 864-4414
Fax Number: (435) 864-6670

The equipment listed below in this AO shall be operated at the following location:

PLANT LOCATION:

850 West Brush Wellman Road, Delta, Millard County, Utah

Universal Transverse Mercator (UTM) Coordinate System: datum NAD27
4,374.4 kilometers Northing, 364.2 kilometers Easting, Zone 12

2. All definitions, terms, abbreviations, and references used in this AO conform to those used in the Utah Administrative Code (UAC) Rule 307 (R307), and Title 40 of the Code of Federal Regulations (40 CFR). Unless noted otherwise, references cited in these AO conditions refer to those rules.
3. The limits set forth in this AO shall not be exceeded without prior approval in accordance with R307-401.
4. Modifications to the equipment or processes approved by this AO that could affect the emissions covered by this AO must be approved in accordance with R307-401-1.
5. All records referenced in this AO or in applicable NSPS, which are required to be kept by the owner/operator, shall be made available to the Executive Secretary or Executive Secretary's representative upon request, and the records shall include the two-year period prior to the date of the request. All records shall be kept for the following minimum periods:
 - A. All Records Five years
 - B. Emission inventories Five years from the due date of each emission statement or until the next inventory is due, whichever is longer.
6. Intermountain Power Service Corporation (IPSC) shall conduct its operations of the Intermountain Generating Station (IGS) coal fired electric steam plant in accordance with the terms and conditions of this AO, which was written pursuant to IPSC's Notice

of Intent submitted to the Division of Air Quality (DAQ) on August 3, 2001.

7. This AO shall replace the AO (DAQE-523-01) dated June 28, 2001.
8. The approved installations shall consist of the following equipment or equivalent*:
 - A. Unit #1 Coal Fired Boiler (Subject to NSPS, Subpart Da)
Rating - 8,500 x 10⁶ Btu/hr (MMBtu/hr)
 - B. Unit #2 Coal Fired Boiler (Subject to NSPS, Subpart Da)
Rating - 8,500 MMBtu/hr
 - C. Coal railcar unloading dust collector 1A
 - D. Coal railcar unloading dust collector 1B
 - E. Coal railcar unloading dust collector 1C
 - F. Coal railcar unloading dust collector 1D
 - G. Coal truck unloading dust collector 2
 - H. Coal reserve reclaim dust collector 3
 - I. Coal transfer building #1 dust collector 4
 - J. Coal transfer building #2 dust collector 5
 - K. Coal transfer building #4 dust collector 6
 - L. Coal crusher building dust collector 11
 - M. U1 Generation building coal dust collector 13A
 - N. U1 Generation building coal dust collector 13B
 - O. U2 Generation building coal dust collector 14A
 - P. U2 Generation building coal dust collector 14B
 - Q. Coal pile active and reserve
 - R. Coal Stackout
 - S. Fuel oil tank 1A
Capacity - 675,000 gallons
 - T. Fuel oil tank 1B
Capacity - 675,000 gallons
 - U. Limestone unloading dust collector 1A
 - V. Limestone unloading dust collector 1B
 - W. Limestone transfer dust collector 1
 - X. Limestone reclaim dust collector 2
 - Y. Limestone silo bin vent filter
 - Z. Limestone crusher dust collector 3
 - AA. Limestone preparation dust collector 4
 - BB. Limestone storage pile
 - CC. Lime silo dust collector 1
 - DD. Lime hopper dust collector 2
 - EE. Soda ash silo dust collector 3
 - FF. Soda ash hopper dust collector 4
 - GG. Fly ash silo bin vent filter 1A
 - HH. Fly ash silo bin vent filter 1B
 - II. Combustion byproducts stackout & stockpile
 - JJ. Combustion byproducts landfill

KK. Unit 1 cooling tower 1A
 LL. Unit 1 cooling tower 1B
 MM. Unit 2 cooling tower 1A
 NN. Unit 2 cooling tower 1B
 OO. Coal sample preparation building dust collector
 PP. Sandblast facility dust collector
 QQ. U1 Generation building vacuum cleaning dust collector
 RR. U2 Generation building vacuum cleaning dust collector
 SS. U1 Fabric filter vacuum cleaning dust collector
 TT. U2 Fabric filter vacuum cleaning dust collector
 UU. GSB vacuum cleaning dust collector
 VV. Guzzler truck dust collector
 WW. Emergency diesel generators
 1A, rated at - 4,000 Hp
 1B, rated at - 4,000 Hp
 1C, rated at - 4,000 Hp
 XX. Solvent washers
 YY. Diesel driven fire pump rated at 290 Hp 1B
 ZZ. Diesel driven fire pump rated at 290 Hp 1C
 AAA. Auxiliary boiler 1A (not subject to NSPS)
 Rating - 166 MMBtu/hr
 BBB. Auxiliary boiler 1B (not subject to NSPS)
 Rating - 166 MMBtu/hr
 CCC. Coal Conveyors
 DDD. Paint booth/shops
 EEE. Engine driven equipment including compressors, generators, hydraulic pumps
 and diesel fire pumps
 FFF. Bulb recycling crusher
 GGG. Laboratory fume hoods
 HHH. Gasoline tank
 Capacity - 500 gallons
 III. Diesel tank
 Capacity - 10,000 gallons
 JJJ. Diesel day tanks
 Capacity - not exceeding 560 gallons per tank
 KKK. Mobile oil storage tanks
 Capacity - not exceeding 12,000 gallons per tank
 LLL. Turbine lube oil units
 Capacity - not exceeding 40,000 gallons per unit
 MMM. Underground storage diesel tank
 Capacity - 20,000 gallons
 NNN. Underground storage gasoline tank
 Capacity - 6,000 gallons
 OOO. Used oil tank
 Capacity - 10,000 gallons
 PPP. Class III Industrial Waste Landfill
 QQQ. Paved haul road

RRR. Haul road and access road
SSS. Coal truck unloading grating

* Equivalency shall be determined by the Executive Secretary.

Limitations and Tests Procedures

9. Emissions to the atmosphere at all times from the indicated emission points shall not exceed the following rates and concentrations:

Each Main Boiler (Rated at $8,500 \times 10^6$ Btu/hr)

<u>Pollutant</u>	<u>lb/ 10^6 Btu heat input</u>	
PM ₁₀	0.020	lb/ 10^6 Btu heat input
SO ₂	0.150	lb/ 10^6 Btu heat input based on 30-day rolling-average 10.0 % of the potential combustion concentration
NO _x	0.500	lb/ 10^6 Btu heat input based on 30-day rolling-average

Dust Collectors

<u>Pollutant/Source</u>	<u>grains/dscf</u>
PM ₁₀	
Rail car unloading (4 units)	0.024 (each unit)
Transfer building one	0.024
Unit one 13A	0.024
Transfer building two	0.024
Transfer building four	0.024
Crusher building one	0.024
Unit one 13B	0.024
Unit two 14A	0.024
Unit two 14B	0.024
Limestone preparation building	0.024

Each Auxiliary Boiler (Rated at 166×10^6 Btu/hr)

<u>Pollutant</u>	<u>lb/ 10^6 Btu heat input</u>	<u>lbs/hr</u>
PM ₁₀	0.10	20
SO ₂	0.69	100
NO _x	0.35	58

10. Visible emissions from the following emission points shall not exceed the following

values:

- A. All abrasive blasting - 40% opacity
- B. All other points - 20% opacity

Opacity observations of emissions from stationary sources shall be conducted according to 40 CFR 60, Appendix A, Method 9.

For sources that are subject to NSPS opacity standards shall be determined by conducting observations in accordance with 40 CFR 60.11(b) and 40 CFR 60, Appendix A, Method 9.

11. The following consumption limit shall not be exceeded:

- A. 50,000 barrels of fuel oil consumed per calendar year in the auxiliary boilers.

To determine compliance with annual limit, the owner/operator shall calculate a total by the January 20th of each year using data from the previous 12 months. Records of consumption shall be kept for all periods when the auxiliary boiler is in operation. Consumption shall be determined by fuel oil totalizer records. The records of consumption shall be kept on a monthly basis.

12. The emergency generators shall be operated on an emergency basis only, except for routine engine maintenance and testing. Records documenting generator usage shall be kept in a log and they shall show the date the generator was used, the duration in hours of the of generator usage, and the reason for each generator usage.
13. The diesel driven fire pumps shall be operated on an emergency basis only, except for routine engine and fire system maintenance and testing. Records documenting diesel driven fire pump usage shall be kept in a log and they shall show the date the diesel driven fire pump was used, the duration in hours of the of diesel driven fire pump, and the reason for each diesel driven fire pump usage.

Roads and Fugitive Dust

14. IPSC shall abide by the latest fugitive dust control plan submitted to the Executive Secretary for control of all dust sources associated with the Intermountain Power Generation site.

The haul road length, speed or any other parameter used to calculate emissions shall not be increased above the limits established in the fugitive dust control plan. The haul road speed shall be posted.

15. The facility shall abide by all applicable requirements of R307- 205 for Fugitive Emission and Fugitive Dust sources.

Fuels

16. The owner/operator shall combust only bituminous and subbituminous coals as primary fuels and shall only use diesel oil or natural gas during the startup, shutdown, maintenance, performance, upsets and flame stabilization in the $8,500 \times 10^6$ Btu/hr boilers. Only No. 2 oil shall be used in 166×10^6 Btu/hr boilers. The owner/operator may fuel-blend self-generated used oil with coal at the active coal pile reclaim structure providing that self-generated used has not been mixed with hazardous waste.
17. The sulfur content of any fuel oil combusted shall not exceed:
 - A. 0.85 lb per $\times 10^6$ Btu heat input for fuel oil used in the main boilers.
 - B. 0.58 percent by weight for fuel oil combusted in the auxiliary boilers.

The sulfur content shall be determined by ASTM Method D-4294-89 or approved equivalent. Certification of fuel oil shall be either by IPSC's own testing or test reports from the fuel oil marketer.

Federal Limitations and Requirements

18. In addition to the requirements of this AO, all applicable provisions of 40 CFR 60, New Source Performance Standards (NSPS) Subpart A, 40 CFR 60.1 to 60.18 and Subpart Da, 40 CFR 60.40a to 60.49a (Standards of Performance for Electric Utility Steam Generating Units for Which Construction is Commenced After September 18, 1978) and Subpart Y, 40 CFR 60.250 to 60.254 (Standards of Performance for Coal Preparation Plants) apply to this installation.

Records & Miscellaneous

19. At all times, including periods of startup, shutdown, and malfunction, owners and operators shall, to the extent practicable, maintain and operate any equipment approved under this Approval Order including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Executive Secretary which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source. All maintenance performed on equipment authorized by this AO shall be recorded, and the records shall be maintained for a period of two years.
20. The owner/operator shall comply with R307-150 Series. Inventories, Testing and Monitoring.
21. The owner/operator shall comply with R307-107. General Requirements: Unavoidable Breakdowns.

The Executive Secretary shall be notified in writing if the company is sold or changes its name.

This AO in no way releases the owner or operator from any liability for compliance with all other

applicable federal, state, and local regulations including R307.

A copy of the rules, regulations and/or attachments addressed in this AO may be obtained by contacting the Division of Air Quality. The Utah Administrative Code R307 rules used by DAQ, the Notice of Intent (NOI) guide, and other air quality documents and forms may also be obtained on the Internet at the following web site:

http://www.eq.state.ut.us/eqair/aq_home.htm

The annual emission estimations below include point source, fugitive emissions, fugitive dust and do not include road dust, tail pipe emissions, grandfathered emissions etc.. These emissions are for the purpose of determining the applicability of Prevention of Significant Deterioration, nonattainment area, maintenance area, and Title V source requirements of the R307. They are not to be used for determining compliance.

The Potential To Emit (PTE) emissions for the IPSC power generation plant are currently calculated at the following values:

	<u>Pollutant</u>	<u>Tons/yr</u>
A.	PM ₁₀	248.88
B.	SO ₂	3,698.32
C.	NO _x	24,178.63
D.	CO	1,312.44
E.	VOC	14.29
F.	HAPs	82.67